

REMARKS/ARGUMENTS

Claims Status / Support for Amendments

Claims 1, 2, 5-26, 28 and 29 are pending. Claim 1 is currently amended to include the subject matter of claim 4. Claims 2, 5-26, 28 and 29 remain as originally/previosly presented. Claims 3 and 27 were previously canceled without prejudice, and claim 4 is currently canceled without prejudice. No new matter has been entered.

§103(a) Rejections

Claims 1, 2, 4-26 and 29 are rejected as obvious over Kawasaki as evidenced by Swern and “Turning the Heat Up on Crisco (and Lard)” in view of Ratka and Johnson.

Claims 24-26, 28 and 29 are rejected as obvious Gupta as evidenced by Ratka. Applicants respectfully traverse these rejections.

At the outset, Applicants point out that all of the independent claims (i.e., claims 1, 8, 9, 13, 14, 18 and 25) recite that the mixing ratio of glycerin fatty monoester (i.e., part (B-1) of component (B)) to propylene glycol fatty monoester (i.e., part (B-2) of component (B)) is 1/0.5 to 1/2 (sometimes referred to herein as “(B-1)/(B-2) = 1/0.5 to 1/2”).

In the outstanding Office Action, the Office has addressed this limitation as follows: “It is appreciated that the ratio of glycerin fatty acid monoester to propylene glycol monoester is not mentioned but one would be expected to adjust the ratio of one emulsifier over the other according to the extent of cost savings desired.” (see page 7 of Office Action).

While “cost savings” may have some effect on the selection of ingredients and the amounts of ingredients used in certain products, Applicants submit that the above assertion by the Office completely ignores the fact that the present invention is drawn toward fat and oil compositions for bakery products and bakery products made from such compositions (e.g., bread, cake, frozen dough for bread). Accordingly, a concern that overrides “cost

savings" is for example, the selection of ingredients and use of amounts of those ingredients that is *necessary* to produce such products. In other words, swapping of ingredients for money savings sake is not always an option in the food product industry, and is even less of an option when the quality of the product is a concern and when certain desired properties of the product are a concern.

With this in mind, Applicants point out that the inventors of the present invention have determined that when the ratio of component (B-1) to (B-2) of the fat and oil composition of the present invention is adjusted to be from 1/0.5 to 1/2 certain properties of the resulting bakery product are enhanced, and that such enhancement is obtained without detriment to the remaining properties. More specifically, when the ratio of component (B-1) to (B-2) of the fat and oil composition used to make bakery products is within the claimed range of "1/0.5 to 1/2," enhanced "softness," enhanced "moist feel" and enhanced "melting feel in the mouth" is obtained for the bakery products (see table below reproduced from the Declaration by Mr. Asabu submitted herewith). On the other hand, when this ratio of (B-1) to (B-2) is outside of the claimed range (i.e., just below or just above the claimed range), inferior "softness," inferior "moist feel" and inferior "melting feel in the mouth" is obtained (see table below reproduced from the Declaration by Mr. Asabu submitted herewith).

component		Additional product 1 control	Additional product 7 control	Additional product 2 the invention	Product of the invention A	Additional product 3 the invention	Additional product 8 the invention	Additional product 4 control	Additional product 5 control	Additional product 6 control
(A)	Purified rape oil (melting point 10°C or less) Commercial vegetable shortening (melting point 37°C)	74.5	74.5	74.5	74.5	74.5	74.5	74.5	74.5	74.5
(B)	the invention (B-1) the invention (B-2) the invention (B-3)	95, manufactured by Kao Corporation Propylene glycol monoetheric acid ester (PGMEA, manufactured by Kao Corporation)	20 (Excel T-95)	15	13.0	10	6.8	5.5	0	0
(B)	the invention (B-2)	Polyglycerine condensed ricinoleic ester (Sun Soft 818SK, manufactured by Taiyo Kagaku Co., Ltd.)	2	2	2	2	2	2	2	2
(B)	control to (B-1)	Polyglycerine fatty acid monoester (MS-SS : Hexadiglycerine monostearate, manufactured by Sakamoto Yakuhin Kogyo Co., Ltd.)	0	0	0	0	0	0	10	7
(B)	the invention manufactured by Nissin Olio Group, Ltd.	Soybean lecithin (Nissin lecithin Dr. Xanthane Gum (Bistop D-3000, manufactured by San-Ei Gen F.F.I., Inc.)	1	1	1	1	1	1	1	1
(C)	the invention (B-1)/ the invention (B-2)	ratio of glycerine fatty acid monoester / propylene glycol monoetheric acid ester	-	1/0.33	1/0.54	1/1	1/1.94	1/2.64	-	-
(B-1)/ (B-2)	control to (B-1)	/ Propylene glycol monoetheric acid ester	-	-	-	-	-	-	1/1	1/1.86
(A) / (B) average			3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
<Results of evaluation of fat and oil composition>										
	Degree of penetration	20	21	25	31	40	25	25	45	42
	Weat flour (bread flour)	80	80	80	80	80	80	80	80	80
	Wheat flour (weak flour)	20	20	20	20	20	20	20	20	20
	Yeast	7	7	7	7	7	7	7	7	7
	Yeast food	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	Sugar	16	16	16	16	16	16	16	16	16
	Skin milk	4	4	4	4	4	4	4	4	4
	Common salt	1	1	1	1	1	1	1	1	1
	Whole egg	20	20	20	20	20	20	20	20	20
	Shortening	15	15	15	15	15	15	15	15	15
	Fat and oil composition	1	1	1	1	1	1	1	1	1
	Compounded amount	5	5	5	5	5	5	5	5	5
	Water	40	40	40	40	40	40	40	40	40
	Roll-in fat and oil	50	50	50	50	50	50	50	50	50
<Results of evaluation of bread manufacturing>										
	Softness	O	O	O	O	O	O	Δ	Δ	×
	Moist feel	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
	Melting feel in the mouth	x	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ

component		Additional product 1 control	Additional product 7 control	Additional product 2 the invention	Product of the invention A	Additional product 3 the invention	Additional product 8 the invention	Additional product 4 control	Additional product 5 control	Additional product 6 control
(A)	Purified rape oil (melting point 10°C or less) Commercial vegetable shortening (melting point 37°C)	0	0	0	0	0	0	0	0	0
(B)	Glycerine fatty monoester	20	15	13.0	10	6.8	5.5	0	0	0
(B)	Propylene glycol monoetheric acid ester (PGMEA, manufactured by Kao Corporation)	0	5	7	10	13.2	14.5	20	10	13
(B)	Polyglycerine condensed ricinoleic ester (Sun Soft 818SK, manufactured by Taiyo Kagaku Co., Ltd.)	2	2	2	2	2	2	2	2	2
(B)	Polyglycerine fatty acid monoester (MS-SS : Hexadiglycerine monostearate, manufactured by Sakamoto Yakuhin Kogyo Co., Ltd.)	0	0	0	0	0	0	0	10	7
(B)	Soybean lecithin (Nissin lecithin Dr. Xanthane Gum (Bistop D-3000, manufactured by San-Ei Gen F.F.I., Inc.)	1	1	1	1	1	1	1	1	1
(C)	the invention (B-1)/ the invention (B-2)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
(B)	control to (B-1)	-	-	-	-	-	-	-	-	-
(B)	the invention manufactured by Nissin Olio Group, Ltd.	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
<Results of evaluation of fat and oil composition>										
	Degree of penetration	20	21	25	31	40	25	25	45	42
	Weat flour (bread flour)	80	80	80	80	80	80	80	80	80
	Wheat flour (weak flour)	20	20	20	20	20	20	20	20	20
	Yeast	7	7	7	7	7	7	7	7	7
	Yeast food	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	Sugar	16	16	16	16	16	16	16	16	16
	Skin milk	4	4	4	4	4	4	4	4	4
	Common salt	1	1	1	1	1	1	1	1	1
	Whole egg	20	20	20	20	20	20	20	20	20
	Shortening	15	15	15	15	15	15	15	15	15
	Fat and oil composition	1	1	1	1	1	1	1	1	1
	Compounded amount	5	5	5	5	5	5	5	5	5
	Water	40	40	40	40	40	40	40	40	40
	Roll-in fat and oil	50	50	50	50	50	50	50	50	50
<Results of evaluation of bread manufacturing>										
	Softness	O	O	O	O	O	O	Δ	Δ	×
	Moist feel	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
	Melting feel in the mouth	x	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ

As can be seen from the designation “the invention” in the enclosed table, product A and additional products 2 and 3 represent the present invention and are within the scope of the claims of the present application. In contrast, additional products 1 and 4-8 are designated as “control” examples and are outside the scope of the claims of the present application.

It is noted that additional product 1 (“control”) is lacking component (B-2) and thus results in an inferior “moist feel” (i.e., Δ versus ⊙) and an inferior “melting feel in the mouth” (i.e., × versus ⊙ and ○), as compared to inventive additional products 2 and 3, as well as inventive product A.

Additional product 4 (“control”) is lacking component (B-1) and thus results in an inferior “softness” (i.e., × versus ⊙ and ○), an inferior “moist feel” (i.e., Δ versus ⊙) and an inferior “melting feel in the mouth” (i.e., × versus ⊙ and ○), as compared to inventive additional products 2 and 3, as well as inventive product A.

Additional product 5 (“control”) contains “control to (B-1)” rather than “the invention (B-1)” and thus results in an inferior “softness” (i.e., Δ versus ⊙ and ○), an inferior “moist feel” (i.e., Δ versus ⊙) and an inferior “melting feel in the mouth” (i.e., Δ versus ⊙ and ○), as compared to inventive additional products 2 and 3, as well as inventive product A.

Additional product 6 (“control”) contains “control to (B-1)” rather than “the invention (B-1)” and thus results in an inferior “softness” (i.e., × versus ⊙ and ○), an inferior “moist feel” (i.e., Δ versus ⊙) and an inferior “melting feel in the mouth” (i.e., Δ versus ⊙ and ○), as compared to inventive additional products 2 and 3, as well as inventive product A.

Additional product 7 (“control”) has a (B-1)/(B-2) ratio of 1/0.33 that is *just below the claimed minimum* of 1/0.5. This difference in the (B-1)/(B-2) ratio results in an inferior “softness” (i.e., ○ versus ⊙), an inferior “moist feel” (i.e., ○ versus ⊙) and an inferior

“melting feel in the mouth” (i.e., Δ versus ○), as compared to inventive additional product 2 which has a (B-1)/(B-2) ratio of 1/0.54 that is *just above the claimed minimum* of 1/0.5.

Additional product 8 (“control”) has a’ (B-1)/(B-2) ratio of 1/2.64 that is *just above the claimed maximum* of 1/2. This difference in the (B-1)/(B-2) ratio results in an inferior “softness” (i.e., Δ versus ○), an inferior “moist feel” (i.e., ○ versus ⊙) and an inferior “melting feel in the mouth” (i.e., ○ versus ⊙), as compared to inventive additional product 3 which has a (B-1)/(B-2) ratio of 1/1.94 that is *just below the claimed maximum* of 1/2.

Accordingly, the fat and oil compositions of the present invention provide for superior breads that have enhanced “softness,” “moist feel” and “melting feel in the mouth” due at least in part to the claimed ratio of (B-1)/(B-2) (i.e., “the mixing ratio of glycerin fatty monoester / propylene glycol fatty monoester by weight”) being 1/0.5 to 1/2.

In addition, Applicants point out that MPEP 2143.01, Part III explains that the mere fact that references *can* be combined *or modified* does not render the resultant combination *or modification* obvious unless the results would have been predictable to one of ordinary skill in the art (citing to *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 2007). There is no evidence of record to date that shows manipulation of the mixing ratio of glycerin fatty monoester (“(B-1)”) to propylene glycol fatty monoester (“(B-2)”) in a fat and oil composition for bakery products significantly effects the resulting properties of such bakery products, nevermind “predictably” effects those properties.

Accordingly, Applicants submit that the Office’s allegation that one would have adjusted the ratio of (B-1) to (B-2) “according to the extent of cost savings desired” is weak at best and fails to establish obviousness in light of the foregoing remarks as well as the data provided in the Declaration. As such, Applicants request withdrawal of the obviousness rejections of record since all of the pending independent claims recite that the (B-1) to (B-2) ratio is limited to 1/0.5 to 1/2.

Notwithstanding the above, Applicants note that the Office currently points out that Kawasaki discloses fat and oil compositions that contain “about 26% of lecithin and glycerol fatty acid ester as emulsifiers.” The Office also points out that Johnson discloses lecithin and other emulsifiers that are typically used in foods (see e.g., page 368). Given that Johnson discloses “propylene glycol monoesters” in the list of “other emulsifiers” and that Johnson states “For many uses they function as coemulsifiers, thus enabling the monoglycerides to do a better job,” the Office has concluded that it would have been obvious for one skilled in the art to include propylene glycol monoesters in the lecithin-containing composition of Kawasaki to arrive at the present invention.

However, Applicants point out that Johnson states “*In bread doughs, lecithin is usually used in combination with other emulsifiers* since its optimum effective level is very low and its effect is almost entirely on the dough-handling characteristics, with some slight crumb-softening action.” As already noted above, Johnson also states “For many uses they function as *coemulsifiers*, thus enabling the monoglycerides to do a better job.”

Accordingly, Applicants submit that the Office’s asserted motivation to modify Kawasaki (i.e., “it is known in the art to use propylene glycol monoesters *as an alternative to lecithin*” and “it would have been obvious to … include the propylene glycol monoester of Johnson … *as a substitute for lecithin*”) is flawed because Johnson actually teaches one skilled in the art to use other emulsifiers “in combination with” lecithin, not in place of lecithin. Thus, without an adequate/non-flawed rationale for modifying Kawasaki according to Johnson, Applicants submit that the Office’s allegations of obviousness are deficient. As such, Applicants again request withdrawal of the obviousness rejections of record.

Conclusion

For the reasons discussed above, Applicants submit that all now-pending claims are in condition for allowance. Applicants respectfully request the withdrawal of the rejections and passage of this case to issue.

Respectfully submitted,

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